Aftershock advisory from the United States Geological Survey (USGS)
Issued on September 29 at 6PM CDT.

- An earthquake of magnitude 5.8 occurred at 7:02AM CDT on September 3, 2016 near Pawnee, Oklahoma. More earthquakes than usual will continue to occur in the mainshock area.
- Be ready for more earthquakes:
    - 7 Steps to Earthquake Safety: http://earthquakecountry.org/sevensteps/
    - Information from the Oklahoma Department of Emergency Management: https://www.ok.gov/OEM/Programs_&_Services/Preparedness/Preparedness_-_Earthquakes.html
    - Information from FEMA: https://www.ready.gov/earthquakes
    - Information from the USGS: http://earthquake.usgs.gov/learn/preparedness.php
- During the next month, there are likely to be up to 8 aftershocks large enough to be felt, and there is a 1 in 33 (3%) chance of one or more aftershocks large enough to potentially cause damage.

What to Expect

It is normal for an earthquake of this size to cause an increase in the number of earthquakes (called aftershocks) in the area. The number of aftershocks will drop off over time, but a large aftershock can increase the numbers again, temporarily.

The aftershocks will occur mostly in the area affected by the magnitude 5.8 Pawnee, Oklahoma, earthquake, approximately within 10 miles of the mainshock.

When there are more earthquakes, the chance of a large earthquake is greater and the chance of damage is greater. The USGS advises everyone to remain aware of the possibility of aftershocks, especially when in or around vulnerable structures such as unreinforced masonry buildings.

No one can predict the exact time or place of any earthquake, including aftershocks. The USGS can forecast how many earthquakes to expect, or the chance of having an earthquake within a given time period.

Current USGS aftershock forecast

As of September 29, 2016 at 6:00 PM CDT, the USGS estimates the chance of more aftershocks as follows.
Within the next month until October 29, 2016 at 6:00 PM CDT:

- the chance of an earthquake large enough to feel (magnitude 3 or higher) is 93%, and it is most likely that up to 8 such earthquakes may occur. This rate is 4 times higher than it was before the magnitude 5.8 Pawnee, Oklahoma, earthquake occurred.
- the chance of an earthquake of magnitude 5 or higher is 1 in 33 (3%).
- the chance of any damaging earthquake is about 5 times higher than it was before the magnitude 5.8 Pawnee, Oklahoma, earthquake occurred.

Within the next year until September 29, 2017 at 6:00PM CDT

- the chance of an earthquake large enough to feel (magnitude 3 or higher) is greater than 99%, and it is most likely that from 4 to 24 such earthquakes may occur. This is about 2 to 3 times higher than it was before the magnitude 5.8 Pawnee, Oklahoma earthquake occurred.
- the chance of an earthquake of magnitude 5 or higher is 1 in 10 (10%) and it is most likely that from 0 to 2 such earthquakes may occur.
- the chance of any damaging earthquake is 2 times higher than it was before the magnitude 5.8 Pawnee, Oklahoma earthquake occurred.

The USGS calculates this earthquake forecast using a statistical analysis based on past earthquakes and the aftershocks recorded for this sequence. The forecast changes as time passes due to the decay in the frequency of aftershocks, larger aftershocks that may trigger further earthquakes, and changes in forecast modeling based on the earthquake data collected.

As compared to the previous analysis on September 15, 2016, the forecasts have changed very little. All of these changes are well within the uncertainty and the aftershock sequence is occurring in a normal fashion as compared to aftershock sequences in general. The forecasts will continue to be refined as more data is collected.

Get more scientific information about:

- the magnitude 5.8 Pawnee, Oklahoma, earthquake and sequence at http://earthquake.usgs.gov/earthquakes/eventpage/us10006jxs
- aftershocks, more generally, at http://earthquake.usgs.gov/learn/glossary/?term=aftershocks

This advisory was issued: September 29, 2016 at 6:00PM CDT.
This advisory will be updated on or before: October 27, 2016.
The most recent advisory can always be found at
http://earthquake.usgs.gov/earthquakes/eventpage/us10006jxs